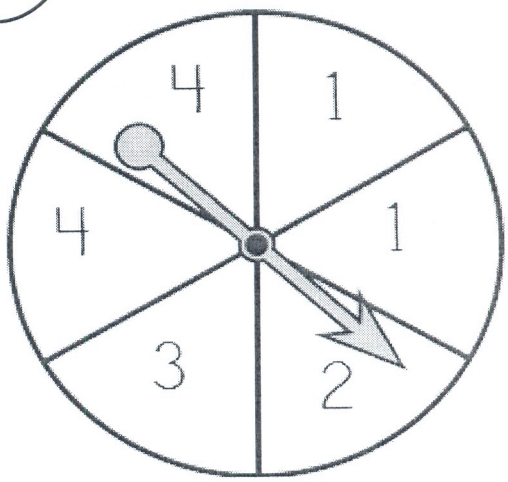
Name: _____ 69

Probability



1. What is the probability of the spinner landing on a 3? _____

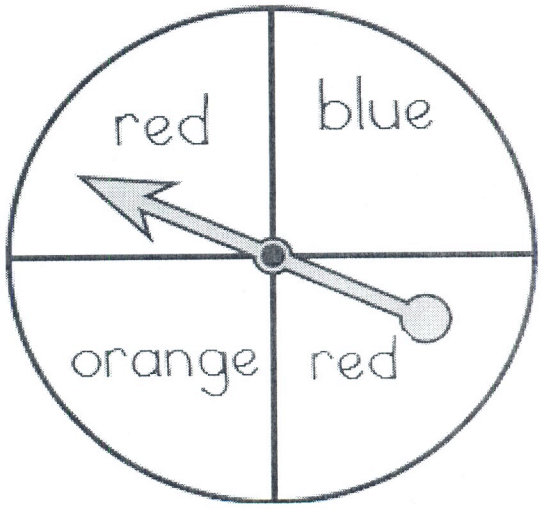
2. What is the probability of the spinner landing on a 1? _____

3. What is the probability of the spinner landing on a 2? _____

4. Are you more likely to spin an odd number or an even number? Explain.

_____

_____



5. What is the probability of the spinner landing on red? _____

6. What is the probability of the spinner landing on orange? _____

7. What is the probability of the spinner landing on a primary color? _____

8. Mike said, "You have a fifty-fifty chance of spinning red." Explain what he means.

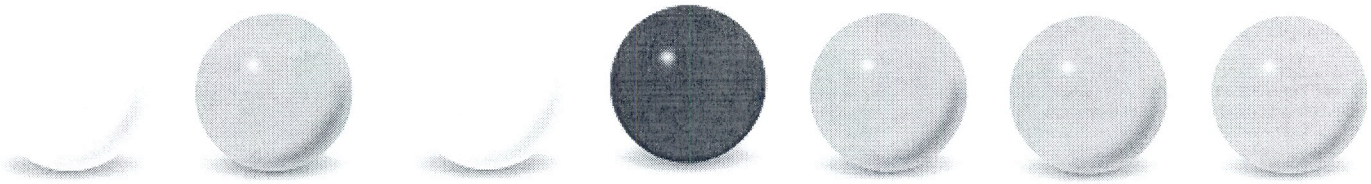
_____

_____

Name: _____

Probability

The marbles pictured below are gray, white, and black. They are placed in a bag and one is drawn at random.



1. Which color marble is least likely to be drawn from the bag? _____

2. What is the probability of drawing the black marble from the bag? _____

3. What is the probability of drawing a gray marble? _____

4. What is the probability of the drawing a white marble? _____

5. What is the probability of drawing a marble that is not white? _____

6. Would you be more likely to draw a marble that is not black or a marble that is not gray? Explain your answer.

   _____

   _____

   _____

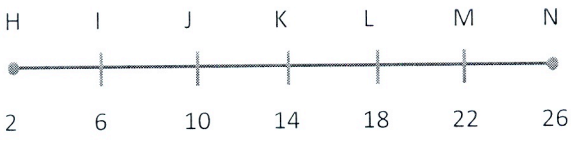
7. If three more black marbles were added to the bag, what would be the probability of drawing a black marble? _____

Name _____ Date _____

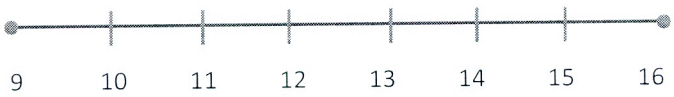
Relative Conditional Probability - Independent Practice Worksheet

Complete all the problems.

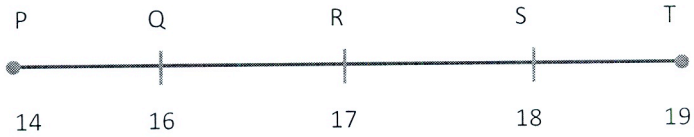
1. A point on $\overline{HN}$ is chosen at random. What is the probability it is also on $\overline{KN}$?



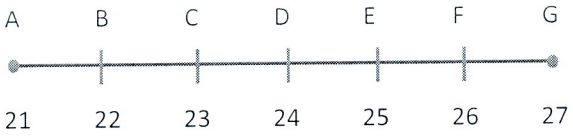
2. A point on the line segment is chosen at random. What is the probability it is between 10 and 16?



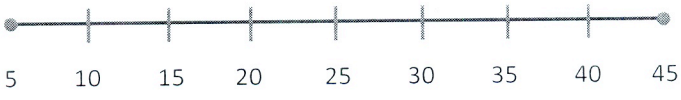
3. A point on $\overline{PT}$ is chosen at random. What is the probability it is also on $\overline{RS}$?



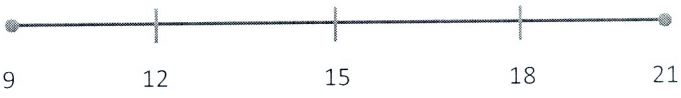
4. A point on $\overline{AG}$ is chosen at random. What is the probability it is also on $\overline{BE}$?



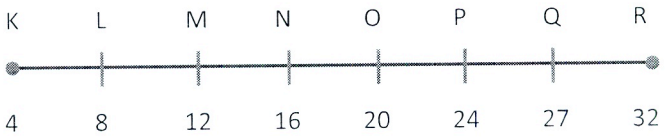
5. A point on the line segment is chosen at random. What is the probability it is between 13 and 45?



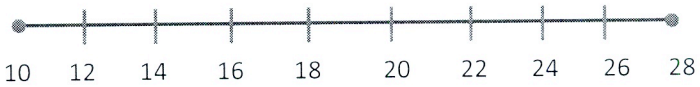
6. A point on the line segment is chosen at random. What is the probability it is between 11 and 21?



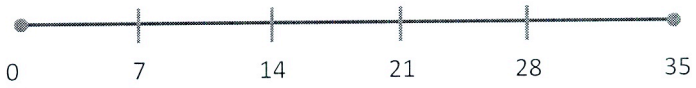
7. A point on $\overline{KR}$ is chosen at random. What is the probability it is also on $\overline{LN}$?



8. A point on the line segment is chosen at random. What is the probability it is between 16 and 28?



9. A point on the line segment is chosen at random. What is the probability it is between 8 and 35?



10. A point on $\overline{CH}$ is chosen at random. What is the probability it is also on $\overline{EF}$?

Practice Sheet – Probability

I. A fair coin is tossed 4 times.
   (1) What is the probability of getting 4 heads?
   (2) What is the probability of not getting 4 heads?
   (3) What is the probability of getting 2 heads and 2 tails?
   (4) What is the probability of getting at least 2 tails?

II. Two fair dice are tossed.
   (1) What is the probability of rolling 2 's?
   (2) What is the probability of not rolling 2 's?
   (3) What is the probability of rolling a on the first die or a on the second die?
   (4) What is the probability of getting a sum of "5" on the two dice?
   (5) What is the probability that the sum of the two dice is less than or equal to "5"?
   (6) What is the probability that the sum of the two dice is less than or equal to "5" given that a appears on at least one of the dice?
   (7) What is the probability that a appears on at least one of the dice given that the sum of the two dice is less than or equal to "5"?

III. A box contains 12 red marbles and 8 blue marbles. Three marbles are drawn at random with replacement.
   (1) What is the probability of getting 3 reds?
   (2) What is the probability of not getting 3 reds?
   (3) What is the probability of getting 2 reds and 1 blue?
   (4) What is the probability of getting at least 2 reds?

IV. A box contains 12 red marbles and 8 blue marbles. Three marbles are drawn at random without replacement.
   (1) What is the probability of getting 3 reds?
   (2) What is the probability of not getting 3 reds?
   (3) What is the probability of getting 2 reds and 1 blue?
   (4) What is the probability of getting at least 2 reds?

V. A card is drawn from a well-shuffled deck of cards.
   (1) What is the probability that the card is a red card?
   (2) What is the probability that the card is a face card (J, Q, or K)?
   (3) What is the probability that the card is a Q or a Club?
   (4) What is the probability that the card is a Heart or a face card?
   (5) What is the probability that the card is an A or a K?

VI. Two cards are drawn from a well-shuffled deck of cards.
   (1) What is the probability that the first card drawn is an A.
   (2) What is the probability that the second card is an A?

(3) What is the probability that both cards are A's?
(4) What is the probability of getting a Heart or a Club?
(5) What is the probability of getting a Heart and a Club?

VII. A fair coin is tossed 10 times.
(1) What is the probability of getting 5 heads and 5 tails?
(2) What is the probability of getting at least 8 heads?

VIII. A fair die is tossed 10 times.
(1) What is the probability of getting exactly 5 's?
(2) What is the probability of getting at least 8 's?
(3) What is the probability of getting at least 2 's?

IX. Joe Doubtful says that he has a 55% chance of going to the class picnic if it does not rain but only a 30% chance of going if it does rain. The weatherman says that there is a 40% chance of rain for the day of the picnic.
(1) What is the probability that Joe will go on the picnic?
(2) Given that Joe went on the picnic, what is the probability that it rained on the day of the picnic?

X. In a certain college, 4% of the men and 1% of the women are taller than 6 feet. Furthermore, 60% of the students are women. If a student is selected at random and is taller than 6 feet, what is the probability that the student is a woman?

Solution Key for Probability

I. (1) 1/16 (2) 15/16 (3) 6/16 (4) 11/16

II. (1) 1/36 (2) 35/36 (3) 11/36 (4) 4/36 (5) 10/36
(6) 4/11 (7) 4/10

III. (1) 27/125 (2) 98/125 (3) 54/125 (4) 81/125

IV. (1) 19.3% (2) 80.7% (3) 46.3% (4) 65.6%

V. (1) 26/52 (2) 12/52 (3) 16/52 (4) 22/52 (5) 8/52

VI. (1) 4/52 (2) 4/52 (3) 1/221 (4) 77/102 (5) 13/102

VII. (1) 252/1024 (2) 56/1024

VIII. (1) 1.3% (2) .002% (3) 51.55%

IX. (1) 45% (2) 27% X. 27%